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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,400	03/01/2004	Takaya Otsuki	18.017-AG	2399

29453 7590 11/01/2005

JUDGE PATENT FIRM
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JAPAN

EXAMINER	
CHANDRAN, BIJU INDIRA	
ART UNIT	**PAPER NUMBER**
2835	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/708,400	OTSUKI ET AL.	
	Examiner	Art Unit	
	Biju Chandran	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/01/2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *13 and 14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/29/04, 3/18/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1- 12, drawn to a heat sink for cooling an electrical component, classified in class 361, subclass 697.

II. Claims 13 and14, drawn to the process of making said heat sink, classified in class 29, subclass 890.035.

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product can be made by a materially different process such as casting.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. James Judge on 09/17/2005 a provisional election was made without traverse to prosecute the invention of I, claims 1-

12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13 and 14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

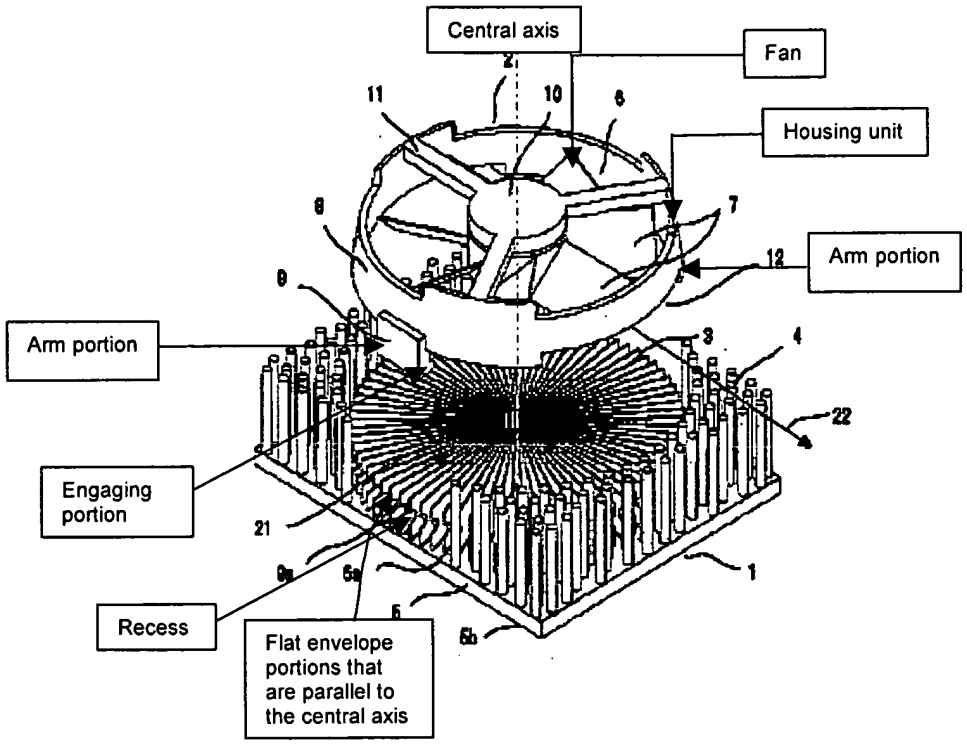
Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

1. Claims 1, 2 and 10 are rejected under 35 U.S.C. 102(a) as being anticipated by Sasa (JP-2003-258473-A).



- Regarding claim 1, Sasa discloses a heat sink fan for cooling a heat generating electrical component, comprising: a heat sink including a base portion with a central axis and a plurality of heat radiating fins integrally or fixedly formed on the side surface of the base portion, each of the heat radiating fins extending away from the central axis, and having at least one end rim face; a fan motor unit including an axial flow fan having a rotational axis, a housing unit connected fixedly with the axial flow fan, the housing unit having a housing and at least one arm portion, wherein the fan motor unit is arranged by the housing unit where the rotational axis is substantially corresponding to the central axis on a first end of the heat sink, for supplying cooling air to the heat sink, the arm

portion is extending from the housing to a second end side of the heat sink, and an engaging portion is formed at a tip of the arm portion, and a protrusion or a recess formed on an envelope surface of the end rim faces of the heat radiating fins, wherein the engaging portion is engaged with the protrusion or the recess so that the fan motor unit is attached to the heat sink with restriction of relative movement in the axial direction.

- With regard to claim 2, Sasa does not explicitly disclose that the protrusion or recess is formed by a machining process. If the protrusion or recess disclosed by Sasa is not infact formed by a machining process, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to create the protrusion or recess by machining or manufactured in any known conventional way as a manner of standard assembly. Even though the claim is limited by and defined by the recited process, the determination of patentability of the product is based on the product itself, and does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product in the prior art, the claim is unpatentable even though the prior art was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985).

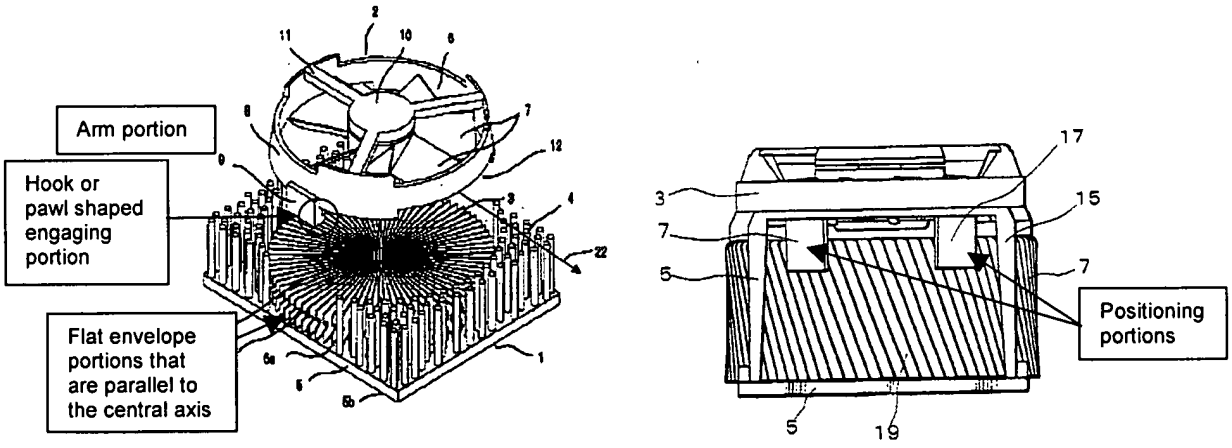
- With respect to claim 10, Sasa discloses a heat sink fan for cooling a heat generating electrical component, comprising: a heat sink including a base portion with a central axis and a plurality of heat radiating fins integrally or fixedly formed on the side surface of the base portion, each of the heat radiating fins extending away from the central axis, and having at least one end rim face; a fan motor unit including an axial flow fan having a rotational axis, a housing unit connected fixedly with the axial flow fan, the housing unit having a housing and two or more arm portions, wherein the fan motor unit is arranged by the housing unit where the rotational axis is substantially corresponding to the central axis on a first end of the heat sink, for supplying cooling air to the heat sink, the arm portions is extending from the housing to a second end side of the heat sink, and two or more engaging portions is formed at a tip of the arm portions: two or more protrusions or recesses formed on an envelope surface of the end rim faces of the heat radiating fins, wherein the engaging portions is engaged with the protrusions or the recesses so that the fan motor unit is attached to the heat sink with restriction of relative movement in the axial direction (marked in figure).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasa in view of Ogawara et al. (US Patent 6,419,007 B1).



- With respect to claim 3, Sasa discloses all the limitations of claim 1. Sasa does not explicitly disclose the fan motor unit additionally having positioning portions extending from the housing towards the second side. Ogawara et al. discloses a heat sink fan for cooling a heat generating electronic component in which the fan motor unit additionally has at least one positioning portion (17) extending from the housing to the second end side of the heat sink, wherein an inner surface of the positioning portion is contacted with a part of an

envelope surface of the heat radiating fins (column 7, lines 14-17). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the positioning portions as taught by Ogawara et al. in the heat sink cooling fan system as taught by Sasa to prevent the fan motor unit from moving against the heat sink radially (Ogawara et al., column 7, lines 14-17).

- With respect to claim 4, Sasa further discloses atleast one flat envelope portion formed on the envelope surface of the heat radiating fins, the flat envelope portion being parallel to the central axis and formed by controlling the lengths of a portion of the heat radiating fins in directions away from the central axis (marked in figure).
- With respect to claim 5, Sasa does not explicitly disclose heat radiating fins that are curved in a predetermined direction. Ogawara at al. discloses heat radiating fins that extend radially with being curved in a predetermined direction with respect to the central line. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the curved fins as taught by Ogawara et al., in the in the heat sink cooling fan system as taught by Sasa to make use of the increased radiation area of the curved fins (Ogawara et al., column 10, lines 64-67).
- With respect to claim 6, Sasa does not explicitly disclose heat radiating fins that are slanted in a predetermined direction. Ogawara et al.

discloses heat radiating fins that extend radially with being slanted in a predetermined direction with respect to the central axis (column 9, lines 10-15). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the slanted fins as taught by Ogawara et al., in the in the heat sink cooling fan system as taught by Sasa to make use of the increased air flow through the fins (Ogawara et al., column 9, lines 39-50).

- With respect to claim 7, Sasa further discloses an engaging portion that is formed like a pawl or a hook extending from the tip of the arm portion toward the central axis (marked in figure).
- With respect to claim 8, Sasa further discloses two or more arm potions extending from the housing to a second end side of the heat sink (marked in figure).
- With respect to claim 9, Sasa as modified by Ogawara et al. discloses all the limitations of claim 8. Ogawara further discloses two or more positioning portion extending from the housing to the second end side of the heat sink (marked in figure).
- With respect to claim 11, Sasa does not explicitly disclose the fan motor unit additionally having positioning portions extending from the housing towards the second side. Ogawara et al. discloses a heat sink fan for cooling a heat generating electronic component wherein the fan motor unit additionally has at least one positioning portion (17)

extending from the housing to the second end side of the heat sink, wherein an inner surface of the positioning portion is contacted with a part of an envelope surface of the heat radiating fins (column 7, lines 14-17). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the positioning portions as taught by Ogawara et al. in the heat sink cooling fan system as taught by Sasa to prevent the fan motor unit from moving against the heat sink radially (Ogawara et al., column 7, lines 14-17).

- With respect to claim 12, Ogawara further discloses two or more positioning portion extending from the housing to the second end side of the heat sink (marked in figure).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Biju Chandran whose telephone number is (571) 272-5953. The examiner can normally be reached on 8AM - 5PM. Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

bic

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